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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,985	05/24/2006	Jean-Marc Inglesse	88852SLP	1327
76523	7590	08/12/2009		
Carestream Health, Inc. 150 Verona Street Rochester, NY 14608			EXAMINER TABATABAI, ABOLFAZL	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 08/12/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,985

**Applicant(s)**

INGLESE, JEAN-MARC

**Examiner**

ABOLFAZL TABATABAI

**Art Unit**

2624

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 15-28, 35-41, 47, 48 and 53-55 is/are rejected.
- 7) ☒ Claim(s) 9-14, 29-34, 42-46 and 49-52 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 05/24/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 15, 16, 19-23, 35, 36, 39-41, 48, 53 and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramanathan et al (U. S. 6, 454, 460 B1).

Regarding claim 1, Ramanathan discloses signal processing method in a dental radiology apparatus comprising an intraoral sensor that delivers at least one analog image output signal in response to an exposure of said sensor to x-rays, comprising the following steps:

converting said at least one analog image output signal into one digital image output signal (Please note, to column 3, line 9);

processing the digital image output signal to obtain a report indicating the x-ray exposure level that has been used to deliver said analog output signal, the report indicating the exposure level corresponding to an exposure level classified as under-exposure, correct exposure or over-exposure (Please note, to column 3, lines 21-32 and column 5, lines 43-52);

supplying the report indicating the exposure level used (Please note, to column 5 lines 56-63 and column 8, lines 43-52).

Regarding claim 2, Ramanathan discloses method according to claim 1,

characterized in that the processing of the digital image output signal is based on the extreme amplitude values of said signal that have been previously determined (Please note, to column 5 lines 56-63 and column 8, lines 43-52).

Regarding claim 3, Ramanathan discloses method according to claim 2, characterized in that the processing comprises the following steps:

comparing one extreme amplitude value or a combination of extreme amplitude values with one or more threshold values (Please note, to column 13 lines 2-15 and column 8, lines 43-52), supplying the report indicating the exposure level used (Please note, to column 5 lines 56-63 and column 8, lines 43-52).

Regarding claim 15, Ramanathan discloses method according to claim 1, characterized in that it includes a step of display of the report indicating the exposure level used on a display screen (please note, to column 4, lines 44-49).

Claim 16 is similarly analyzed as claim 15 above.

Claim 19 is similarly analyzed as claim 1 above.

Regarding claim 20, Ramanathan discloses method according to claim 19, characterized in that the visual effect is color (please note, to column 4, lines 42-49).

Regarding claim 21, Ramanathan discloses method according to claim 1, characterized in that the conversion step is performed in an analog-digital converter having an input window adjusted to the dynamic range of the analog signal delivered by the sensor (please note, to column 7, lines 30-40).

Claim 22 is similarly analyzed as claim 1 above.

Claim 23 is similarly analyzed as claim 3 above.

Claim 35 is similarly analyzed as claim 15 above.

Claim 36 is similarly analyzed as claim 16 above.

Claim 39 is similarly analyzed as claim 19 above.

Claim 40 is similarly analyzed as claim 20 above.

Claim 41 is similarly analyzed as claim 21 above.

Claim 48 is similarly analyzed as claim 21 above.

Claim 53 is similarly analyzed as claim 15 above.

Claim 55 is similarly analyzed as claim 21 above.

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-8, 17, 18, 24-28, 37, 38, 47 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramanathan et al (U. S. 6, 454, 460 B1) in view of Bamberger et al (U S 5,970,164).

Regarding claim 4, Ramanathan is silent about the specific details regarding method according to claim 1, characterized in that the processing first includes a step of forming a curve giving the number of pixels of the image signal per gray level. In the same field of endeavor however, Bamberger discloses system and method for diagnosis of living tissue disease comprises forming a curve giving the number of pixels

of the image signal per gray level (please note, to column 7, lines 50-67 and column 27, lines 38-48).

Regarding claim 5, Ramanathan is silent about the specific details regarding method according to claim 4, characterized in that the processing includes a step of determining the extreme amplitude values (max, min) of the curve's digital gray levels. In the same field of endeavor however, Bamberger discloses system and method for diagnosis of living tissue disease comprises determining the extreme amplitude values (max, min) of the curve's digital gray levels (please note, to column 24, lines 38-45)

Regarding claim 6, Ramanathan is silent about the specific details regarding method according to claim 5, characterized in that the processing includes a step of determining a difference  $\Delta = \text{max} - \text{min}$ . In the same field of endeavor however, Bamberger discloses system and method for diagnosis of living tissue disease comprises determining a difference  $\Delta = \text{max} - \text{min}$  (please note, to column 6, lines 60-66).

Regarding claim 7, Ramanathan is silent about the specific details regarding method according to claim 6, characterized in that the processing includes a first step of comparison of the difference  $\Delta$  with a first value threshold. In the same field of endeavor however, Bamberger discloses system and method for diagnosis of living tissue disease comprises comparison of the difference  $\Delta$  with a first value threshold (please note, to column 27, lines 18-37).

Claim 8 is similarly analyzed as claim 3 above.

Regarding claim 17, Ramanathan is silent about the specific details regarding method according to claim 15, characterized in that the report indicating the exposure level is displayed in the form of at least one indicator whose position varies according to the report obtained by the signal processing.

In the same field of endeavor however, Bamberger discloses system and method for diagnosis of living tissue disease comprises the report indicating the exposure level is displayed in the form of at least one indicator whose position varies according to the report obtained by the signal processing (please note, to column 27, lines 18-37).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use forming a curve giving the number of pixels of the image signal per gray level and the extreme amplitude values (max, min) of the curve's digital gray levels as taught by Bamberger in the system of Ramanathan because Bamberger provides Ramanathan a system to improve visualization of the suspected lesions and diagnosis of living tissue diseases.

Claim 18 is similarly analyzed as claim 6 above.

Claim 24 is similarly analyzed as claim 4 above.

Claim 25 is similarly analyzed as claim 5 above.

Claim 26 is similarly analyzed as claim 6 above.

Claim 27 is similarly analyzed as claim 7 above.

Claim 28 is similarly analyzed as claim 8 above.

Claim 37 is similarly analyzed as claim 17 above.

Claim 38 is similarly analyzed as claim 18 above.

Claim 47 is similarly analyzed as claim 1 above.

Claim 54 is similarly analyzed as claim 47 above.

### **Allowable Subject Matter**

5. Claims 9-14, 29-34, 42-46, 49-52 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Other Prior Art**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kamps (U S 6,047,043) disclose x-ray examination apparatus including an exposure control system.

Suzuki et al (U S 5,663,998) disclose x-ray imaging apparatus and automatic density correction method.

### **Contact Information**

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Werner, can be reached at (571) 272-7401. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Abolfazl Tabatabai/

Primary Examiner, Art Unit 2624

August 10, 2009

